os-9010330

ENTERED   OIPE

#7

RAW SEQUENCE LISTING   DATE: 03/03/2003 P.6
PATENT APPLICATION: US/09/832,189A   TIME: 12:54:19

Input Set : **A:\PH-1167US seq-revised.txt**
Output Set: **N:\CRF4\03032003\I832189A.raw**

```
 3 <110> APPLICANT: RIKEN
 5 <120> TITLE OF INVENTION: Truncated Reelin Protein and DNA Encoding the Same
 7 <130> FILE REFERENCE: PH-1167
 9 <140> CURRENT APPLICATION NUMBER: US 09/832,189A
10 <141> CURRENT FILING DATE: 2001-04-11
12 <150> PRIOR APPLICATION NUMBER: JP 2000-109954
13 <151> PRIOR FILING DATE: 2000-04-11
15 <160> NUMBER OF SEQ ID NOS: 28
17 <170> SOFTWARE: PatentIn Ver. 2.0
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 2274
21 <212> TYPE: DNA
22 <213> ORGANISM: Xenopus laevis
24 <220> FEATURE:
25 <221> NAME/KEY: misc_feature
26 <222> LOCATION: (100)
27 <223> OTHER INFORMATION: a or g or t or c
29 <220> FEATURE:
30 <221> NAME/KEY: CDS
31 <222> LOCATION: (157)..(1455)
33 <220> FEATURE:
34 <221> NAME/KEY: sig_peptide
35 <222> LOCATION: (157)..(234)
37 <220> FEATURE:
38 <221> NAME/KEY: misc_feature
39 <222> LOCATION: (241)..(726)
40 <223> OTHER INFORMATION: F-spondin domain
42 <220> FEATURE:
43 <221> NAME/KEY: misc_feature
44 <222> LOCATION: (847)..(1197)
45 <223> OTHER INFORMATION: CR-50 epitope region
47 <400> SEQUENCE: 1
48 cattctactg tcacgttaac tttccatttt cttcacttta actttgaaga atttaaaaaa 60
50 aaccattaat tatatattta tataaatata tatatataan ctctgtatcc caggctgctt 120
52 atgaagaaag ctcattaaga acagtgggac ccagga atg gaa ctg ctc cac acc   174
53                                            Met Glu Leu Leu His Thr
54                                            1                   5
56 ttc tgc ggt ggg cgc tgg act ttg ctg ctc ttc acg ggg atc ttg tgc   222
57 Phe Cys Gly Gly Arg Trp Thr Leu Leu Leu Phe Thr Gly Ile Leu Cys
58             10                  15                  20
60 ttt gtt gtt gcc cgc gga gtg ggg tat tat ccc agg ttc tct cca ttc   270
61 Phe Val Val Ala Arg Gly Val Gly Tyr Tyr Pro Arg Phe Ser Pro Phe
62             25                  30                  35
```

W--> 50 (line marker)

RAW SEQUENCE LISTING   DATE: 03/03/2003
PATENT APPLICATION: **US/09/832,189A**   TIME: 12:54:19

Input Set : **A:\PH-1167US seq-revised.txt**
Output Set: **N:\CRF4\03032003\I832189A.raw**

```
 64 ttt ttc ctt tgc act cat cat gga gaa ctg gaa gga gat ggg gaa caa   318
 65 Phe Phe Leu Cys Thr His His Gly Glu Leu Glu Gly Asp Gly Glu Gln
 66     40              45              50
 68 gga gaa gtg ctc atc tct ctg cac ctg gcg ggc aac ccc agc tac tac   366
 69 Gly Glu Val Leu Ile Ser Leu His Leu Ala Gly Asn Pro Ser Tyr Tyr
 70 55              60              65              70
 72 ata cct ggg cag gag tac cat gtg acc ata tcc act agt acc ttc ttt   414
 73 Ile Pro Gly Gln Glu Tyr His Val Thr Ile Ser Thr Ser Thr Phe Phe
 74             75              80              85
 76 gat ggt ctt ctg gtg act gga ctt tac act tct acc agt gtt caa gcg   462
 77 Asp Gly Leu Leu Val Thr Gly Leu Tyr Thr Ser Thr Ser Val Gln Ala
 78             90              95              100
 80 tct cag agc att gga ggc tct aaa gca ttt gga ttt ggt att atg agc   510
 81 Ser Gln Ser Ile Gly Gly Ser Lys Ala Phe Gly Phe Gly Ile Met Ser
 82         105             110             115
 84 gac cgt cag ttt ggt acc cag ttt atg tgc agt gtc gtt gct tcc cac   558
 85 Asp Arg Gln Phe Gly Thr Gln Phe Met Cys Ser Val Val Ala Ser His
 86     120             125             130
 88 gtg agt cat ctt ccc aca aca aac cta agt ttt gta tgg att gca cca   606
 89 Val Ser His Leu Pro Thr Thr Asn Leu Ser Phe Val Trp Ile Ala Pro
 90 135             140             145             150
 92 cca gca ggt aca gga tgt gtc aac ttc atg gcc aca gca aca cat agg   654
 93 Pro Ala Gly Thr Gly Cys Val Asn Phe Met Ala Thr Ala Thr His Arg
 94             155             160             165
 96 gga caa gtt att ttc aag gat gcc ctg gca caa caa ctg tgc gaa caa   702
 97 Gly Gln Val Ile Phe Lys Asp Ala Leu Ala Gln Gln Leu Cys Glu Gln
 98         170             175             180
100 gga gct cct act gaa gct ccc ttg cgg cct aat tta gcc gaa att cac   750
101 Gly Ala Pro Thr Glu Ala Pro Leu Arg Pro Asn Leu Ala Glu Ile His
102     185             190             195
104 agt gaa agc atc ctt tta cga gat gat ttt gac tca tat aag ctt cag   798
105 Ser Glu Ser Ile Leu Leu Arg Asp Asp Phe Asp Ser Tyr Lys Leu Gln
106     200             205             210
108 gaa ttg aat cca aat att tgg ctc cag tgc aga aat tgc gaa gtt ggt   846
109 Glu Leu Asn Pro Asn Ile Trp Leu Gln Cys Arg Asn Cys Glu Val Gly
110 215             220             225             230
112 gag cag tgt ggt gca att atg cat ggt ggg gca gtc act ttt tgt gat   894
113 Glu Gln Cys Gly Ala Ile Met His Gly Gly Ala Val Thr Phe Cys Asp
114             235             240             245
116 ccg tat gga cca aga gaa ttg ata act gtt caa atg aac aca act acg   942
117 Pro Tyr Gly Pro Arg Glu Leu Ile Thr Val Gln Met Asn Thr Thr Thr
118             250             255             260
120 gca tct gtt ttg cag ttt tct att ggg tca gga tcg tgc agg ttc agc   990
121 Ala Ser Val Leu Gln Phe Ser Ile Gly Ser Gly Ser Cys Arg Phe Ser
122         265             270             275
124 tat tca gac cct gga att gtg gtg tca tac aca aag aat aat tca tct  1038
125 Tyr Ser Asp Pro Gly Ile Val Val Ser Tyr Thr Lys Asn Asn Ser Ser
126     280             285             290
128 agt tgg atg cca ttg gag aga att agt gct cct tcc aat gtt agc acc  1086
```

```
129 Ser Trp Met Pro Leu Glu Arg Ile Ser Ala Pro Ser Asn Val Ser Thr
130 295             300             305         310
132 atc att cac att att tac cta cct cct gaa gct aaa gga gaa aat gtg    1134
133 Ile Ile His Ile Ile Tyr Leu Pro Pro Glu Ala Lys Gly Glu Asn Val
134             315             320             325
136 aaa ttc cgt tgg agg cag gag aac atg cag gca ggt gat gtg tat gaa    1182
137 Lys Phe Arg Trp Arg Gln Glu Asn Met Gln Ala Gly Asp Val Tyr Glu
138             330             335             340
140 gcc tgc tgg gca ctg gat aac att ttg att atc aat gct gct cat aaa    1230
141 Ala Cys Trp Ala Leu Asp Asn Ile Leu Ile Ile Asn Ala Ala His Lys
142             345             350             355
144 gaa gtc gtg tta gaa gac aat cta gat cca atg gac aca gga aac tgg    1278
145 Glu Val Val Leu Glu Asp Asn Leu Asp Pro Met Asp Thr Gly Asn Trp
146     360             365             370
148 ctt ttt ttc cct ggg gct act gta aag cat acc tgt cag tcg gat gga    1326
149 Leu Phe Phe Pro Gly Ala Thr Val Lys His Thr Cys Gln Ser Asp Gly
150 375             380             385             390
152 aac tct ata tat ttt cat ggt aca gaa agc agt gaa tac aac ttt gct    1374
153 Asn Ser Ile Tyr Phe His Gly Thr Glu Ser Ser Glu Tyr Asn Phe Ala
154             395             400             405
156 act acc aga gat gtg gat ctt tcc agt gag gac atc cag gac cag tgg    1422
157 Thr Thr Arg Asp Val Asp Leu Ser Ser Glu Asp Ile Gln Asp Gln Trp
158             410             415             420
160 tct gaa gag ttt gag aat cta cca gct ggg taa attttagatg tagccatgag  1475
161 Ser Glu Glu Phe Glu Asn Leu Pro Ala Gly
162             425             430
164 cattacattt tatcacgtga aaatgcaaga aacagtattt atatacatat tttaaaggtc  1535
166 aatacagaac cctataaatg gcaggttagg gctaccatgt aaatatttt aatgttcata   1595
168 atgtcatagg tggtaagtat tttacatagc agttactgat tgattattat tgtttgtctt  1655
170 ttacccagtt acagctaaca cacagggcat ttttttccaa tggcaacatc cattttgccg  1715
172 ctctgagcag aacatttgtt tcatttatgg catttgaacc tgtgtctatg agagtgcagc  1775
174 taaaataaac ttcctggcta tgggtgttac catacaacac tggtacctca tgacatatga  1835
176 aaaatatgac tcacattaaa tcagtaagat cagttcaagt atagtacggt gcattaatct  1895
178 gccaataaac atttagaatt gtattttata ttttatattt aagattagaa ttgactccat  1955
180 tcttgtacct tgcatcacat ttgtggctag tttatgggtc aatagacagc catcatacat  2015
182 tagtcagagt aaatcgagca ttacaaaact caatgagcca tagtgagtgt gacaatcaga  2075
184 agtgactgtc aagtaaatca accatttgct catacagatg cacatttgaa cagtggattc  2135
186 ttatccagaa agggccattt tttactatca ctctgggatt taaatgccac ttctaattgg  2195
188 aacttccagg tcacaaaaat agaatggaca tttaaacatc atggttctca ttacccctaa  2255
190 taaaactccg gttttttta                                              2274
193 <210> SEQ ID NO: 2
194 <211> LENGTH: 432
195 <212> TYPE: PRT
196 <213> ORGANISM: Xenopus laevis
198 <400> SEQUENCE: 2
199 Met Glu Leu Leu His Thr Phe Cys Gly Gly Arg Trp Thr Leu Leu Leu
200  1               5               10              15
202 Phe Thr Gly Ile Leu Cys Phe Val Val Ala Arg Gly Val Gly Tyr Tyr
203             20              25              30
```

```
205 Pro Arg Phe Ser Pro Phe Phe Phe Leu Cys Thr His His Gly Glu Leu
206          35              40              45
208 Glu Gly Asp Gly Glu Gln Gly Glu Val Leu Ile Ser Leu His Leu Ala
209      50              55              60
211 Gly Asn Pro Ser Tyr Tyr Ile Pro Gly Gln Glu Tyr His Val Thr Ile
212 65              70              75              80
214 Ser Thr Ser Thr Phe Phe Asp Gly Leu Leu Val Thr Gly Leu Tyr Thr
215              85              90              95
217 Ser Thr Ser Val Gln Ala Ser Gln Ser Ile Gly Gly Ser Lys Ala Phe
218          100             105             110
220 Gly Phe Gly Ile Met Ser Asp Arg Gln Phe Gly Thr Gln Phe Met Cys
221          115             120             125
223 Ser Val Val Ala Ser His Val Ser His Leu Pro Thr Thr Asn Leu Ser
224      130             135             140
226 Phe Val Trp Ile Ala Pro Pro Ala Gly Thr Gly Cys Val Asn Phe Met
227 145             150             155             160
229 Ala Thr Ala Thr His Arg Gly Gln Val Ile Phe Lys Asp Ala Leu Ala
230              165             170             175
232 Gln Gln Leu Cys Glu Gln Gly Ala Pro Thr Glu Ala Pro Leu Arg Pro
233          180             185             190
235 Asn Leu Ala Glu Ile His Ser Glu Ser Ile Leu Leu Arg Asp Asp Phe
236          195             200             205
238 Asp Ser Tyr Lys Leu Gln Glu Leu Asn Pro Asn Ile Trp Leu Gln Cys
239      210             215             220
241 Arg Asn Cys Glu Val Gly Glu Gln Cys Gly Ala Ile Met His Gly Gly
242 225             230             235             240
244 Ala Val Thr Phe Cys Asp Pro Tyr Gly Pro Arg Glu Leu Ile Thr Val
245              245             250             255
247 Gln Met Asn Thr Thr Thr Ala Ser Val Leu Gln Phe Ser Ile Gly Ser
248          260             265             270
250 Gly Ser Cys Arg Phe Ser Tyr Ser Asp Pro Gly Ile Val Val Ser Tyr
251      275             280             285
253 Thr Lys Asn Asn Ser Ser Ser Trp Met Pro Leu Glu Arg Ile Ser Ala
254      290             295             300
256 Pro Ser Asn Val Ser Thr Ile Ile His Ile Ile Tyr Leu Pro Pro Glu
257 305             310             315             320
259 Ala Lys Gly Glu Asn Val Lys Phe Arg Trp Arg Gln Glu Asn Met Gln
260              325             330             335
262 Ala Gly Asp Val Tyr Glu Ala Cys Trp Ala Leu Asp Asn Ile Leu Ile
263          340             345             350
265 Ile Asn Ala Ala His Lys Glu Val Val Leu Glu Asp Asn Leu Asp Pro
266          355             360             365
268 Met Asp Thr Gly Asn Trp Leu Phe Phe Pro Gly Ala Thr Val Lys His
269      370             375             380
271 Thr Cys Gln Ser Asp Gly Asn Ser Ile Tyr Phe His Gly Thr Glu Ser
272 385             390             395             400
274 Ser Glu Tyr Asn Phe Ala Thr Thr Arg Asp Val Asp Leu Ser Ser Glu
275              405             410             415
277 Asp Ile Gln Asp Gln Trp Ser Glu Glu Phe Glu Asn Leu Pro Ala Gly
```

RAW SEQUENCE LISTING   DATE: 03/03/2003
PATENT APPLICATION: **US/09/832,189A**   TIME: 12:54:19

Input Set : **A:\PH-1167US seq-revised.txt**
Output Set: **N:\CRF4\03032003\I832189A.raw**

```
278               420                425                430
281 <210> SEQ ID NO: 3
282 <211> LENGTH: 2745
283 <212> TYPE: DNA
284 <213> ORGANISM: Mus musculus
286 <220> FEATURE:
287 <221> NAME/KEY: CDS
288 <222> LOCATION: (283)..(2052)
290 <220> FEATURE:
291 <221> NAME/KEY: sig_peptide
292 <222> LOCATION: (283)..(363)
294 <220> FEATURE:
295 <221> NAME/KEY: misc_feature
296 <222> LOCATION: (284)..(849)
297 <223> OTHER INFORMATION: F-spondin domain
299 <220> FEATURE:
300 <221> NAME/KEY: misc_feature
301 <222> LOCATION: (970)..(1320)
302 <223> OTHER INFORMATION: CR-50 epitope region
304 <400> SEQUENCE: 3
305 ggggcgtcgc gtgcacaccg gcggcggcgg cgctcggagg cggacgacgc gctctcggcg 60
307 cccgcggccc cggttccccc cgcgctctcg ctccggcggc ccaaagtaac ttcgggagcc 120
309 tcggtctccc gctaacttcc ccccgcgggc tcggttgccc ggacccgctc ggctcgagcc 180
311 cgccgccggc tcgccttccc cgcacgcggc tcctccgtgc cggtgcctcc gaaagtggat 240
313 gagagagcgc gcggggcgcg cggcggcacg gagcgcggcg gc atg gag cgc ggc    294
314                                                  Met Glu Arg Gly
315                                                   1
317 tgc tgg gcg ccg cgg gct ctc gtc ctg gcc gtg ctg ctg ctg ctg gcg  342
318 Cys Trp Ala Pro Arg Ala Leu Val Leu Ala Val Leu Leu Leu Leu Ala
319   5                  10                  15                  20
321 acg ctg agg gcg cgc gcg gcc acc ggc tac tac ccg cgc ttc tcg cct  390
322 Thr Leu Arg Ala Arg Ala Ala Thr Gly Tyr Tyr Pro Arg Phe Ser Pro
323                  25                  30                  35
325 ttc ttt ttc ctg tgc acc cac cac ggg gag ctg gaa ggg gat ggg gag  438
326 Phe Phe Phe Leu Cys Thr His His Gly Glu Leu Glu Gly Asp Gly Glu
327                  40                  45                  50
329 cag ggc gag gtg ctc att tcc ctg cac att gcg ggc aac ccc acc tac  486
330 Gln Gly Glu Val Leu Ile Ser Leu His Ile Ala Gly Asn Pro Thr Tyr
331          55                  60                  65
333 tac gta ccg gga cag gaa tac cat gtt aca att tca aca agc acc ttc  534
334 Tyr Val Pro Gly Gln Glu Tyr His Val Thr Ile Ser Thr Ser Thr Phe
335      70                  75                  80
337 ttt gat ggc ttg ctg gtg acg gga ctc tat acc tcg aca agc atc cag  582
338 Phe Asp Gly Leu Leu Val Thr Gly Leu Tyr Thr Ser Thr Ser Ile Gln
339 85                  90                  95                  100
341 tct tct cag agc att gga ggc tcc agc gcc ttt gga ttc ggg atc atg  630
342 Ser Ser Gln Ser Ile Gly Gly Ser Ser Ala Phe Gly Phe Gly Ile Met
343                  105                 110                 115
345 tcc gac cac cag ttt ggt aac cag ttt atg tgc agt gtg gtg gcc tct  678
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 03/03/2003
PATENT APPLICATION: **US/09/832,189A**   TIME: 12:54:20

Input Set : **A:\PH-1167US seq-revised.txt**
Output Set: **N:\CRF4\03032003\I832189A.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 100
Seq#:5; N Pos. 8

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 1

VERIFICATION SUMMARY   DATE: 03/03/2003
PATENT APPLICATION: **US/09/832,189A**   TIME: 12:54:20

Input Set : **A:\PH-1167US seq-revised.txt**
Output Set: **N:\CRF4\03032003\I832189A.raw**

L:50 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:60
L:622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0